

IN THE CLAIMS

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2           1.     (Cancelled)

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2           2.     (Currently Amended) The method of claim 1 wherein the  
3 programmable at least a portion of the PLD chip is partitioned into a plurality of rows and  
4 columns of logic array blocks (LABs).

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2           3.     (Currently Amended) The method of claim 1 A method of verifying a  
3 full-chip electronic design of a programmable logic device (PLD) chip, the method comprising:  
4 partitioning the PLD chip into a plurality of blocks;  
5 generating a block level RTL model of one of the plurality of blocks, wherein generating  
6 a block level RTL comprises:

7                 creating a block level schematic of an electronic design;  
8                 extracting a block Ram Bit Address(RBA) file from the block level schematic;  
9                 extracting a block level CRAM array from the block level RBA file; and  
10                generating the block level RTL using the block level CRAM array;  
11                generating a block level functional representation of the one of the plurality of blocks;  
12                producing a full chip RTL model using the block level RTL model and the block level  
13 functional representation; and  
14                using the full chip RTL model for verification, simulation or debugging.

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2           4.     (Original) The method of claim 3 wherein the block level CRAM array  
3 comprises absolute coordinates and RAM bit values for each CRAM bit.

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2           5.     (Currently Amended) The method of claim 4 wherein the CRAM  
3 iscomprises at least one of EPROM, EEPROM, fuse, anti-fuse, SRAM, MRAM, FRAM, or  
4 DRAM.

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2           6.     (Currently Amended) The method of claim 1-A method of verifying a  
3 full-chip electronic design of a programmable logic device (PLD) chip, the method comprising:  
4 partitioning the PLD chip into a plurality of blocks;  
5 generating a block level RTL model of one of the plurality of blocks, wherein generating  
6 a block level RTL comprises:

7                   creating a block level schematic of an electronic design;  
8                   generating a full chip schematic using a plurality of the block level schematics;  
9                   producing a full chip RBA file from the full chip schematic;  
10                  extracting block level RBA file from the full chip RBA file;  
11                  extracting a block level CRAM array from the block level RBA file; and  
12                  generating a block level RTL model using the block level CRAM array;  
13                  generating a block level functional representation of the one of the plurality of blocks;  
14                  producing a full chip RTL model using the block level RTL model and the block level  
15                  functional representation; and  
16                  using the full chip RTL model for verification, simulation or debugging.

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2                  7.       (Original) The method of claim 6 wherein the block level CRAM array  
3                  comprises absolute coordinates and RAM bit values for each CRAM bit.

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2                  8.       (Currently Amended) The method of claim 7 wherein the CRAM  
3                  iscomprises at least one of EPROM, EEPROM, fuse, anti-fuse, SRAM, MRAM, FRAM, or  
4                  DRAM.

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2                  9.       (Currently Amended) The method of claim 43 further including:  
3                  comparing the block level RTL model to the block level schematic before producing a  
4                  full chip RTL model; and  
5                  modifying the block level functional representation and the block level CRAM array if  
6                  the block level RTL is not equivalent to the block level schematic.

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2                  10.      (Currently Amended) The method of claim 43 wherein the PLD is a  
3                  complex programmable logic device ("CPLD"), programmable array logic ("PAL"),  
4                  programmable logic arrays ("PLA"), field PLA ("FPLA"), erasable PLDs ("EPLD"), electrically  
5                  erasable PLD ("EEPLD"), logic cell arrays ("LCA") or field programmable gate arrays  
6                  ("FPGA").

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2                  11.      (Currently Amended) The method of claim 43 wherein the  
3                  programmable logic device is embedded into another electronic device.

- 2                 12. (Currently Amended) The method of claim 121 wherein the ~~other~~  
3 electronic device comprises programmable and non-programmable circuitry.  
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2                 13. (Original) The method of claim 2 wherein the LAB comprises a plurality  
3 of one or more of the following sub-blocks: LE, LIM, LAB wide, LEIM, CRAM and DIM.  
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2                 14. (Currently Amended) The method of claim 13 wherein one or more of  
3 the plurality of blocks ~~arecomprise~~ digital signal processing blocks, input/output blocks, or  
4 memory blocks,~~etc.~~  
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2                 15. (Currently Amended) A data processing system for verifying a full-chip  
3 electronic design of a programmable logic device (PLD) chip, the data processing system  
4 including instructions for implementing the method of claim 13.  
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6                 16. (Currently Amended) A method of verifying a programmable region of  
7 an electronic design, the method comprising:  
8                 partitioning the programmable region into a plurality of blocks;  
9                 generating a block level RTL model of one of the plurality of blocks wherein generating  
10 a block level RTL comprises:  
11                 creating a block level schematic of an electronic design;  
12                 extracting a block Ram Bit Address(RBA) file from the block level schematic;  
13                 extracting a block level CRAM array from the block level RBA file; and  
14                 generating the block level RTL using the block level CRAM array;  
15                 generating a block level functional representation of the one of the plurality of blocks;  
16                 producing a full region RTL model from the block level RTL model and the block level  
17 functional representation; and  
18                 using the full region RTL model for verification, simulation or debugging.